dril[§]master[®]

4.8 VOLT RECHARGEABLE CORDLESS SCREWDRIVER



SET UP AND OPERATING INSTRUCTIONS



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Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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For technical questions or replacement parts, please call 1-800-444-3353.

SPECIFICATIONS

Batteries	4.8 V NiCd Battery Pack
Charging Time	No more than 10 hours
Charger Adapter	Input: 120 VAC, 60 Hz
	Output: 6 VDC, 300 mA
Speed	200 RPM
Chuck	Hex drive
Features	6 - Driver bits included

Save This Manual

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

GENERAL SAFETY RULES

WARNING! Read all instructions Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury. The term "power tool" in all of the warnings listed below refers to your line-operated (corded) power tool or battery-operated (cordless) power tool.

Work Area

- 1. Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control. Protect others in the work area from debris such as chips

and sparks. Provide barriers or shields as needed.

Electrical Safety

- Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is grounded.
- 2. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- 3. Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
- 4. The Charger Adapter is equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
- Do not abuse the Charger Adapter charging cable. Never use it to carry the tool or pull the Adapter from an outlet. Keep the charging cable away from heat, oil, sharp edges, or moving parts. Replace Charger Adapter when charging cable is damaged.

 When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W". These extension cords are rated for outdoor use, and reduce the risk of electric shock.

Personal Safety

- Stay alert. Watch what you are doing, and use common sense when operating a power tool. Do not use a power tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
- 2. **Dress properly.** Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.
- 3. Avoid accidental starting. Be sure the Power Switch is off before plugging in. Carrying power tools with your finger on the Power Switch, or plugging in power tools with the Power Switch on, invites accidents.
- 4. Remove adjusting keys or wrenches before turning the power tool on. A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.
- 5. **Do not overreach.** Keep proper footing and balance at all times. Proper footing and balance enables better control of the power tool in unexpected situations.
- 6. **Use safety equipment.** Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool Use and Care

- Use clamps (not included) or other practical ways to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.
- 2. **Do not force the tool.** Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
- Do not use the power tool if the Trigger Switch does not turn it on or off. Any tool that cannot be controlled with the Trigger Switch is dangerous and must be replaced.
- 4. Disconnect the Charger Adapter from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
- Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
- 6. **Maintain tools with care.** Keep cutting tools sharp and clean. Properly maintained tools with a sharp cutting edge are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools "Do not use" until repaired.
- 7. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- 8. Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may become hazardous when used on another tool.

Service

- 1. Tool service must be performed by qualified repair personnel. Service performed by unqualified personnel could result in a risk of injury.
- 2. When servicing a tool, use only identical replacement parts. Follow instructions in the "Inspection, Maintenance, And Cleaning" section of this manual. Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

VIBRATION HAZARD

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibrationrelated injury:

- 1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
- Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
- 3. Wear suitable gloves to reduce the vibration effects on the user.
- 4. Use tools with the lowest vibration when there is a choice between different processes.

- 5. Include vibration-free periods each day of work.
- Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
- 7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

SPECIFIC SAFETY RULES FOR THIS PRODUCT

- 1. Hold tool by insulated gripping surfaces when performing an operation as tool could come into contact with hidden wiring. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
- 2. Maintain labels and nameplates on the Cordless Screwdriver. If unreadable or missing, contact Harbor Freight Tools for a replacement.
- 3. Wear safety impact eye goggles with side shields when using the Cordless Screwdriver. Using personal safety devices reduce the risk for injury. Safety impact eye goggles with side shields, and heavy work gloves are available from Harbor Freight Tools.
- 4. Maintain a safe working environment. Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use a power tool in areas near flammable chemicals, dusts, and vapors. Do not use this product in a damp or wet location. Keep extension cord away from water.
- 5. Avoid unintentional starting. Make sure you are prepared to begin work before turning on the Cordless Screwdriver.

- 6. Do not force the Cordless Screwdriver. This tool will do the work better and safer at the capacity for which it was designed.
- 7. **Unplug the Charger Adapter** from the Cordless Screwdriver and the electrical outlet before use or before performing any inspection, maintenance, or cleaning procedures.
- 8. Never leave the Cordless Screwdriver unattended while running. Turn power off if you have to leave the Cordless Screwdriver.
- 9. People with pacemakers should consult their physician(s) before using this product. Electromagnetic fields in close proximity to a heart pacemaker could cause interference to or failure of the pacemaker.
- 10. Connect the Charger Adapter to a Ground Fault Circuit Interrupter (GFCI) protected electrical outlet.

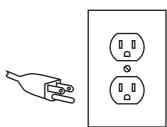
GROUNDING

Improperly connecting the grounding wire can result in electric shock.

Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Grounded Tools: **Tools with Three Prong Plugs**

- 1. Tools marked with "Grounding Required" have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down. grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock.
- 2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal.

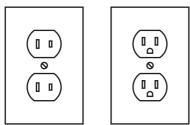


3-Prong Plug and Outlet

3. The tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the preceding illustration. (See 3-Prong Plug and Outlet.)

Double Insulated Tools: Tools with Two Prong Plugs

Tools marked "Double Insulated" do 1. not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code.



Outlets for 2-Prong Plug

2. Double insulated tools may be used in either of the 120 volt outlets shown in the preceding illustration. (See Outlets for 2-Prong Plug.)

Extension Cords

- Grounded tools require a three wire extension cord. Double Insulated tools can use either a two or three wire extension cord.
- 2. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. (See Table A.)
- 3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. (See Table A.)
- 4. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required. (See Table A.)
- 5. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size. (See Table A.)
- If you are using an extension cord outdoors, make sure it is marked with the suffix "W-A" ("W" in Canada) to indicate it is acceptable for outdoor use.

- Make sure the extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
- Protect the extension cords from sharp objects, excessive heat, and damp or wet areas.

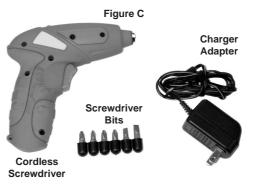
RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120/240 VOLT)					
NAMEPLATE AMPERES	EXTENSION CORD LENGTH				
(at full load)	25'	50'	75'	100'	150'
0 - 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-
TABLE A	* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.				

Symbology

	Double Insulated
	Canadian Standards Association
(UL)	Underwriters Laboratories, Inc.
V~	Volts Alternating Current
Α	Amperes
n ₀ xxxx/min.	No Load Revolutions per Minute (RPM)

UNPACKING

When unpacking, make sure that all the parts are included. See Figure C below.



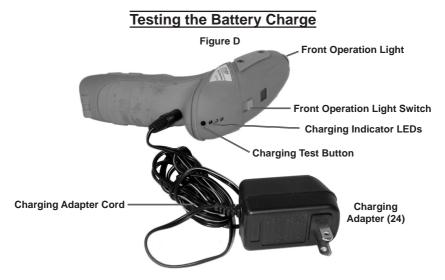
If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

Battery Precautions

- 1. To avoid accidents, never use a different charger adapter with this tool.
- 2. Do not expose this product to rain or wet conditions.
- 3. To avoid damage of cable and plug, never pull the cable to disconnect the Charger Adapter.
- 4. Do not charge the Screwdriver if either the cable or plug are damaged.
- 5. Repairs should be carried out by a qualified service technician only.
- 6. Do not touch the battery poles with any conductive source.
- Note: The internal Battery Pack (22) does not come fully charged from the factory. Charge before using.

CHARGING THE BATTERY

- 1. Insert the Charger Adapter (24) cord plug into the unit connector as shown below.
- Plug the Charger Adapter module into an electrical outlet. The red Charging Indicator on the Cordless Screwdriver will light. Charge the new battery for 10 hours. When the battery is fully charged all three LEDs will light up. Remove the Charger Adapter (24) from the electrical outlet. The red Charging indicator will turn off. See Figure D.



Push the charging test button to display battery power. All three LEDs lit means the battery is fully charged. Two LEDs lit indicate that the battery is half charged. One LED lit indicates that the tool should be charged. See Figure D above.

<u>Caution:</u> Do not overcharge the Battery. Never charge for more than 10 hours continuously. Charger Adapter should not be left plugged in after charging is complete.

OPERATING INSTRUCTIONS

- 1. Snap in the desired hex driver into the front of the Cordless Screwdriver. See Figure E below.
- If light is needed while driving screws, turn on the Front Operation Light Switch (see Figure D for its location). The light will turn on when the Trigger Switch is on.
- Figure E
- Engage the screwdriver bit over the item being turned.
 The bit size must match the size of the item being turned.
- Squeeze and hold the top part of the Trigger Switch (14) to begin clockwise operation. For counterclockwise operation, squeeze the lower part of the Trigger Switch.

Screwdriver Bits

TROUBLESHOOTING

Problem	Possible Cause	Probable Solution	
Cordless Screwdriver does not operate when Trigger Switch is pressed.	Battery Pack is not charged.	Recharge Battery Pack.	
Battery Pack does not recharge after connecting Charger Adapter for hours.	 No power to Charger Adapter. Charger Adapter defective. Battery Pack defective. 	 Check electrical outlet for power. Replace Charger Adapter. Replace Battery Pack. 	

MAINTENANCE

- 1. When finished using the Screwdriver, place in its box along with accessories and store in a clean and dry location.
- 2. Recharge the Battery Pack (22) once a month.
- 3. Properly recycle Battery when Screwdriver reaches the end of its product life.

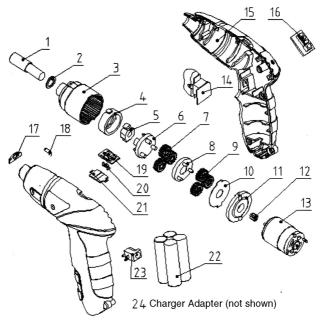
PARTS LIST

Part	Description	Qty
1	Output Axis	1
2	Gasket	1
3	Gearbox	1
4	Ring, Inner, Self-lock	1
5	Core, Inner, Self-lock	1
6	Block, Self-lock	1
7	Gear, Front Star	1
8	Holder, Star Gear, Middle	1
9	Gear, Star, Back	1
10	Gasket, Large	1
11	Motor Holder	1
12	Motor Gear	1

Part	Description	Qty
13	Motor	1
14	Trigger Switch	1
15	Housing (left / right)	1
16	LED Indicator	1
17	Light Cover	1
18	Light Bulb	1
19	Switch, Light	1
20	Connector Pin	1
21	PDC	1
22	Battery Pack	1
23	Charger Socket	1
24	Charger Adapter	1

NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

ASSEMBLY DRAWING



PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTA-TION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACE-MENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF RE-PLACEMENT PARTS THERETO.

LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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